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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,594	04/09/2004	Mark A. Anderson	10030958-1	1551
57299	7590	02/07/2008		
Kathy Manke Avago Technologies Limited 4380 Ziegler Road Fort Collins, CO 80525			EXAMINER KARIMI, PEGEMAN	
			ART UNIT 2629	PAPER NUMBER
			NOTIFICATION DATE 02/07/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

avagoip@system.foundationip.com
kathy.manke@avagotech.com
scott.weitzel@avagotech.com

Office Action Summary	Application No. 10/821,594	Applicant(s) ANDERSON, MARK A.	
	Examiner Pegeman Karimi	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on 11/21/2007 has been entered and considered by the examiner.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11, 13-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker (U.S. Patent No. 4,578,674) in view of Lyon (U.S. Patent No. 4,521,772).

As to claim 1, Baker discloses an optical-signal receiver (220), comprising:

an optical sensor (224) operable to receive an optical signal from an optical-signal emitter (250), (col. 5, lines 6-8) communicatively coupled to an electronic system (col. 4, lines 49-52); and

a processor (300) operable to implement a performance characteristic value specified by the optical signal (col. 6, lines 30-34).

Baker does not mention an optical imaging array sensor, Lyon teaches an optical imaging array sensor (12, Fig. 2) operable to receive an optical signal (col. 6, lines 4-8). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the optical imaging array sensor of Lyon to the optical-signal receiver device of Baker because the device includes an IC chip that contains an optical sensor array and circuitry to bring about detectable bitmaps based upon a plurality of sensor cells making up the array and the distinguishable bitmaps are employed as a means for comparison to provide an output indicative of the direction and amount of movement of the cursor control device relative to an optical contrasting input to the array (abstract, lines 5-11).

As to claims 3 and 17, Baker discloses a system (Fig. 2), comprising:

an optical-signal generator (250);

an optical-signal emitter (250) coupled to the generator (connected through cable 216);

and an optical-signal receiver (220) having a performance characteristic set to a first value (initial X and Y position), the receiver receiving from the emitter an optical signal (IR signal 252, Fig. 3) operable to set the performance characteristic to a second

value (second value = second position of the mouse, col. 7, lines 47-52). Baker does not mention the receiver including an optical imaging array sensor to receive from the emitter an optical signal. Lyon teaches the receiver (100) including an optical imaging array sensor (12) to receive from the emitter (17) an optical signal (col. 6, lines 4-8).

As to claim 19, Baker discloses a method implemented by a receiver (220) having a performance characteristic set to a first value (initial position of X and Y), comprising:

communicating a state signal (ultrasonic signal) identifying a state (position) of the receiver to an electronic system (250), (col. 4, lines 49-51);

receiving an optical signal (252) from an emitter (250) communicatively coupled to the electronic system (col. 4, lines 49-52),

the optical signal (252) operable to set the performance characteristic to a second value (When the initial position of the mouse is determined, microprocessor clears the counter 816 and reads another interval measurement by sending another I.R. signal), (col. 5, lines 15-17; and col. 6, lines 5-12 and lines 38-41). Baker does not mention an emitter communicatively coupled to the electronic system at an optical imaging array sensor of the receiver. Lyon teaches an emitter (17) communicatively coupled to the electronic system at an optical imaging array sensor of the receiver (emitter 17 communicates/linked with the optical imaging array sensor, 12, by radiation provided by emitter 17)

As to claim 2, Baker teaches a receiver (220) further comprising a transmitter (230) operable to communicate a state signal (ultrasonic signals) identifying a state of the receiver (movement of the mouse) to the electronic system (col. 5, lines 15-17; and col. 6, lines 5-12 and lines 38-41).

As to claim 4, Baker teaches the generator (250) comprises a computer system (300, Fig. 6).

As to claim 5, Baker teaches the emitter (210) comprises a video-display monitor (Fig. 2, col. 5, lines 62-63) configured to display said optical signal (display 210 displays a cursor control signal, which is generated by infrared signal transmitted from control base 250 to calculate cursor control signals for X and Y motion of a display cursor), (col. 5, lines 25-28).

As to claim 6, Baker teaches the receiver (220) is operable to generate a state signal (generates an ultrasonic signal) identifying a state of the receiver (movement of the mouse in x and Y directions), (col. 5, lines 15-17; and col. 6, lines 5-12 and lines 38-41).

As to claim 7, Baker teaches the receiver is further operable to communicate (communicates through 230) the state signal to the generator (250), (col. 5, lines 15-17).

As to claim 8, Baker teaches the emitter (210) comprises a state-signal receiver (254 and 256) operable to receive the state signal (ultrasonic signal from 230 are

received at 254 and 256) from the optical-signal receiver (220) and provide the state signal (position of the mouse) to the generator (250), (col. 6, lines 5-12; and lines 38-41).

As to claim 9, Baker teaches the receiver (220) comprises a wireless optical mouse (col. 4, lines 49-50).

As to claim 10, Baker teaches a performance associated with the characteristic (movement of the cursor, col. 6, lines 38-41) is displayable by the generator (col. 5, lines 57-62).

As to claim 11, Baker teaches the performance characteristic (position detection) comprises a frame rate (frame rate = 40KHz, col. 5, lines 12-14).

As to claim 13, Baker teaches the state (movement of mouse) comprises velocity relative to a surface (214), (col. 6, lines 64-67).

As to claim 14, Baker teaches the state signal (ultrasonic signal) comprises:

a characteristic having first and second values (first value = initial position),
(second value = second position of the mouse); and

the first and second state-signal characteristic values (values calculated by the ultrasonic signals, col. 7, lines 8-11) respectively correspond to the first and second performance-characteristic values (depending on the position of the mouse in X and Y

direction the ultrasonic signal determines the location of the mouse, col. 7, lines 12-15 and lines 47-52).

As to claim 15, Baker teaches the optical signal (252) specifies the second value (When the initial position of the mouse is determined, microprocessor clears the counter 816 and reads another interval measurement by sending another I.R. signal), (col. 5, lines 15-17; and col. 6, lines 5-12 and lines 38-41).

As to claim 16, Baker teaches the state signal (ultrasonic signal from 230) specifies the second value (When the initial position of the mouse is determined, microprocessor clears the counter 816 and reads another interval measurement by sending another I.R. signal and reading a second ultrasonic signal), (col. 5, lines 15-17; and col. 6, lines 5-12 and lines 38-41).

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker in view of Lyon and further in view of Wenstrand (U.S. Patent 7,199,783).

As to claim 12, Note the discussion of Baker and Lyon Above. Baker teaches the performance characteristic. Baker and Lyon do not teach an inactivity-period threshold. Wenstrand teaches an inactivity-period threshold (col. 4, lines 18-21). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the inactivity-period of Wenstrand to the optical mouse of Baker as modified by Lyon because during the inactivity-period/ sleep mode less power is consumed because the deactivated portion of the mouse are drawing

relatively less energy compared to the energy drawn during the active mode (col. 4, lines 29-32)

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baker in view of Misek (U.S. Pub. No. 2002/0140677).

As to claim 18, Baker teaches an optical-signal receiver (220), comprising:

generating an optical signal (252) to be received by the optical-signal receiver (220) from an optical-signal emitter (250), (col. 5, lines 6-8),

the receiver having a performance characteristic (position) set to a first value (initial position of X and Y),

the optical signal (252) operable to set the performance characteristic to a second value (When the initial position of the mouse is determined, microprocessor clears the counter 816 and reads another interval measurement by sending another I.R. signal), (col. 5, lines 15-17; and col. 6, lines 5-12 and lines 38-41); and

displaying the optical signal (col. 5, lines 58-63).

Baker does not mention programming an optical mouse, Misek teaches programming an optical-signal receiver ([0007], lines 2-5). Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to have added the programmable optical mouse of Misek to the optical-signal receiver of Baker

because the programmable mouse would benefit that the user may customize features such as navigation parameters user interface operations and power swing. ([0004], lines 7-8).

Response to Arguments

7. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of new ground(s) of rejection. A new ground(s) of rejection is made in view of Lyon (U.S. Patent No. 4,521,772).

In view of amendment, the reference of Lyon has been added for new ground of rejection.

Applicant argues that Baker does not include "an optical imaging array sensor". Lyon teaches an optical imaging array sensor (12, Fig. 2), operable to receive an optical signal from an optical-signal emitter (col. col. 6, lines 4-8). Adding the optical imaging array sensor of Lyon to the optical-signal receiver device of Baker, wherein the array has detectable bitmaps based upon a plurality of sensor cells, the distinguishable bitmaps are employed as a means for comparison to provide an output indicative of the direction and amount of movement of the cursor control device relative to an optical contrasting input to the array (abstract, lines 5-11).

Applicant argues that Baker does not recite "displaying the optical signal". Baker mentions displaying the optical signal (display 210 displays a cursor control signal, which is generated by infrared-signal/ optical-signal transmitted from control base 250 to calculate cursor control signals for X and Y motion of a display cursor).

Applicant argues that Baker does not recite "an optical signal to be received by the optical-signal receiver from an optical-signal emitter". Baker teaches an optical signal (252) to be received by the optical-signal receiver (220) from an optical-signal emitter (250), (The optical-signal communicated between the optical-signal emitter and the optical-signal receiver is displayed as a cursor, wherein generated cursor control signal by the optical-signal controls signals for X and Y motion of a display cursor).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Inquires

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegeman Karimi whose telephone number is (571) 270-1712 and direct fax number is (571) 270-2712. The examiner can normally be reached on Monday-Thursday 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pegeman Karimi
February 3rd, 2008



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800**